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ABSTRACT

This module is designed to provide the prospective teacher of troubled youth with experience, knowledge, skills, and attitudes necessary for carrying on successful action research. The terminal objective is described as follows: given information relevant to writing a research proposal (outline, proposal format, and the means to conduct research, i.e., gathering and organizing data and research procedures), the participant will write an action research proposal for a master's degree project which will be scientifically developed and relatively refined for teachers in the field of delinquency-prone youth. The module is divided into the following sections: description, steps for completing the module, preassessment, description of enabling activities, postevaluation, remediation, and appendixes. The appendixes contain the following elements through which the student may choose to work: (a) Investigate the Library, (b) Investigate Types of Research, (c) Investigate Collecting and Organizing Data, (d) Investigate Tools of Research, (e) Investigate Statistics, and (f) Learner Options. Terminal objectives and steps for completion are given for each of these elements. (JA)

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ED 100889

EXPERIMENTAL

Component: Master's Degree in Education:
Research for the Teacher
MSED 004. (USC-U)

Module: Preparing for Research
MSED 004.01 (USC-U)

Module: Carrying on Research
MSED 004.02 (USC-U)

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PROSPECTUS

PREPARING FOR RESEARCH

Perspective:

Much of the really significant information needed to bridge the gap between scientific research and the classroom teacher will be supplied as teachers in public schools become more research oriented and apply the problem solving techniques of action research to the solution of local problems. The procedures involved in action research will supply teachers with a tool which enhances their involvement in identifying and researching problems important in their classrooms, translating the results into use, and sharing the results with their colleagues. The introspective process involved in action research will give prospective teachers of the troubled youth a unique depth of perception into the problems of the juvenile delinquent. This procedure is aimed toward developing practical ways of improving education for the youth in his various school settings.

Objective:

Terminal Objective:

Given input in information relevant to writing a research proposal (outline and proposal format, and the means to conducting research, i.e., gathering and organizing data and research procedures), the participant will write an action research proposal for a Master's degree project. The proposal will be scientifically developed and relatively refined for teachers in the field of delinquency prone youth, and will meet minimum criteria as defined in the post evaluation.

(By special arrangement with a consultant, the participant may produce an alternative to the standard research project. This may be in the form of media, a proposal for research funds, or any other alternative agreed upon mutually by the participant and a consultant.)

Prerequisite:

Successful completion of all modules and/or University courses which are prerequisite to the Master's degree seminar.

Description of the Module: MSED 004.01 (USC-U)

This module provides the prospective teacher of troubled youth with experience, knowledge, skills and attitudes necessary for carrying on successful action research. Such research is in problems related to providing a productive learning environment for the delinquent troubled youth.

The enabling objectives for this module are:

1. Given input (by reading and/or lecture) in "the problem in research," the participant identifies and states a series of problems (in the field of delinquency prone youth) which he might undertake as an action research project.

2. Given input (by reading and/or lecture) in "the research proposal," the participant writes an outline for a research proposal.

3. The partipant optionally, or according to the prescription of the evaluation group, investigates (by use of the worktexts included as appendixes) the following areas:

1. The library
2. The types of research
3. Collecting and organizing data
4. The tools of research
5. Statistics
6. Learner options

4. Given input (by reading and/or lecture) in "the research proposal" and "reporting action research," the participant wrties a research proposal.

Steps for Completing this Module: MSED 004.01 (USC-U)

004.01.0 Enter

1.1 Read the Prospectus.

1.2 Meet with all participants and a consultant to discuss the prospectus.

1.3.0 Pre-Assessment

1.3.1 React to the Pre-Assessment.

1.3.2 Were the results of your Pre-Assessment favorable enough to warrant your moving directly into preparation for the Post Evaluation?

-If yes, go to decision point 1.3.3.
-If no, begin to get input re researching at 1.4.0.

1.3.3 Do you need information re reporting research (form, style, procedures, mechanics, etc.) (A consultant can help you make this decision)

-If yes, go to 1.12.0 for appropriate input.
-If no, go directly to 1.13 to begin writing a research proposal.

1.4.0 Input: "The Problem." Choose one or both:

1.4.1 Read re the problem in research.

1.4.2 Attend a lecture re the problem in research.

1.5.0 Input: "The Research Proposal." Choose one or both:

1.5.1 Read re the research proposal.

1.5.2 Attend a lecture re the research proposal.

1.6 Identify several problems which you would like to undertake as an action research project. State the problems according to the criteria in 1.4.1 and/or 1.4.2. Discuss your problem statements with a consultant.

1.7 Select one of the problems stated in 1.6; write an outline for an action research proposal to investigate this problem. The outline should conform to the criteria described in 1.5.1 and/or 1.5.2.

1.8.1 Meet with a consultant and other participants to evaluate the research proposal outline, your progress, and your needs.

1.8.2 Was the evaluation of your research proposal outline favorable enough to warrant your moving directly into preparation for the Post Evaluation? Do you have enough information re the elements in 1.9.0 to move into writing a research proposal?

-If both answers are yes, go to 1.12.0 for input re reporting research.

-If either answer is no, select those enabling elements which will help you to strengthen your outline, write a new one, or gain needed information.

1.9.0 Using the evaluation of your progress, needs, and research proposal outline (1.8.1) as a guide, select from the following enabling elements those which are appropriate. Note: The order of undertaking the elements is optional.

1.9.1 Investigate the library sources, resources, and services by using the worktext supplied as Appendix A.

1.9.2 Investigate the types of research using the worktext supplied as Appendix B.

1.9.3 Investigate the means and procedures for collecting and organizing data by using the worktext supplied as Appendix C.

1.9.4 Investigate the tools of research by using the worktext supplied as Appendix D.

1.9.5 Investigate the principles and use of statistics in research by using the worktext supplied as Appendix E.

1.9.6 Investigate any area which will aid you in your pursuit of the Terminal Objective. Refer to Appendix F.

1.10 Select a problem which you would like to undertake as an action research project; write an outline for a research proposal to investigate this problem. The outline should conform to the criteria described in 1.5.1 and/or 1.5.2. (Note: See 1.8.2, Description of Enabling Activities to determine whether or not you are eligible to omit 1.10 and 1.11).

1.11 Meet with a consultant and other participants to evaluate the research proposal outline. By referring to 1.8.2, move to 1.12 or re-cycle through appropriate enabling elements.

1.12.0 Input: "Reporting Action Research." Choose one or both:

1.12.1 Read re reporting action research.

1.12.2 Attend a lecture re reporting action research.

1.13 Write a research proposal based on the outline which has been evaluated by the consultant and other participants as part of the Pre-Assessment, 1.8.1, or 1.11.

1.14 React to the Post Evaluation.

1.15 Were the results of your Post Evaluation favorable enough to warrant your exit?

-If yes, exit.
-If no, recycle through the module, beginning at the earliest point which can help solve the problem(s) in your research proposal. (See Remediation).

Pre-Assessment: MSED 004.01 (USC-U)

Part I: (01.3.1.1) Guide to Elements of 1.9.0

For the following questions, circle the appropriate response and carefully read the suggestions in parentheses. Plan to refer to this list of answers as part of your evaluation in 1.8.1.

1. Can you make efficient use of library tools when conducting research and/or investigation? (Such tools include the card catalog; the Dewey Decimal System; appropriate reference materials, i.e., indexes and guides to periodicals and journals, reference books, abstracts, the ERIC system, encyclopedias, almanacs, yearbooks, handbooks, guides, biographical references, directories, dictionaries, atlases, gazetteers.)

A. Yes
B. No) (Perhaps you will need to work
C. Not Certain) through 1.9.1 if it is relevant to the research problem you will be pursuing and/or if the evaluation group suggests this Element.)

2. a. Can you list the three types of research* and their three sub-categories**?

A. Yes
B. No
C. Not Certain

b. Can you list the characteristics, tools, methods, and techniques of each of the three types of research?

A. Yes
B. No
C. Not Certain

* Historical, Descriptive, Experimental

** Pure, applied, action

Pre-Assessment: MSED 004.01 (USC-U)

Part I: (01.3.1.1) Guide to Elements of 1.9.0

For the following questions, circle the appropriate response and carefully read the suggestions in parentheses. Plan to refer to this list of answers as part of your evaluation in 1.8.1.

1. Can you make efficient use of library tools when conducting research and/or investigation? (Such tools include the card catalog; the Dewey Decimal System; appropriate reference materials, i.e., indexes and guides to periodicals and journals, reference books, abstracts, the ERIC system, encyclopedias, almanacs, yearbooks, handbooks, guides, biographical references, directories, dictionaries, atlases, gazetteers.)

A. Yes
B. No) (Perhaps you will need to work
C. Not Certain) through 1.9.1 if it is relevant to the research problem you will be pursuing and/or if the evaluation group suggests this Element.)

2. a. Can you list the three types of research* and their three sub-categories**?

A. Yes
B. No
C. Not Certain

b. Can you list the characteristics, tools, methods, and techniques of each of the three types of research?

A. Yes
B. No
C. Not Certain

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* Historical, Descriptive, Experimental

** Pure, applied, action

c. Can you choose the appropriate type of research to use in studying any given problem?

A. Yes
B. No
C. Not Certain

(If you circled No or Not Certain for any of the above, you may need to work through 1.9.2, if it is relevant to the research problem you will be pursuing and/or if the evaluation group suggests this element.)

3. Are you aware of and able to apply the appropriate methods, considerations, and techniques (not tools) used in collecting and organizing data?

A. Yes
B. No) (Perhaps you will need to work through 1.9.3, if it is relevant to the research problem you will be pursuing and/or if the evaluation group suggests this Element.)
C. Not Certain)

4. a. Can you list the major tools used in conducting research?*

A. Yes
B. No
C. Not Certain

b. For the major tools, can you describe strengths, weaknesses and appropriate use in research situations?

A. Yes
B. No
C. Not Certain

c. Can you use the tools of research effeciently and in accordance with the principles of scientific research?

A. Yes
B. No
C. Not Certain

(If you circled No or Not Certain for any of the above, you may need to work through 1.9.4, if it is relevant to the research problem you will be pursuing and/or if the evaluation group suggests this Element.)

*Hammer, screwdriver, pliers....did you think we were silly enough to list the tools here? See page 11 after answering this question.

5. Do you have working knowledge of statistical principles, vocabulary, techniques, methods, tools, analysis and their appropriate application to the field of research?

A. Yes
B. No
C. Not Certain

(Perhaps you will need to work through 1.9.5, if it is relevant to the research problem you will be pursuing and/or if the evaluation group suggests this Element.)

PART II: (01.3.1.2) DIAGNOSTIC SELF-TEST

For the directions below, complete as much of the assignment as your present knowledge and skills will allow.

1. Write a statement of a problem in the field of delinquency prone youth which you would like to investigate in an action research project. (Criteria: Is the problem statement a) relevant to the education of delinquency prone youth? b) in the field of action research? c) sufficiently delimited? d) written as a question or a declarative statement? e) suggestive of a specific answer or conclusion?)

2. Using the problem statement from above, write an outline for a research proposal. (Criteria: Are the contents complete, accurate, fully developed, and in suitable form? Contents should include all of the following which are appropriate for the project being proposed: a) problem statement, b) hypothesis, c) significance of the problem, d) definitions, assumptions, and limitations, e) résumé of related literature, f) proposed procedures, g) a time schedule, and h) inferred conclusions.

After completing the Pre-Assessment, meet with a consultant to evaluate your performance. He will help you with decision point 1.3.2 (and 1.3.3, if appropriate.)

The major tools of research are as follows: questionnaire, opinionnaire (attitude scale), observation, interview, psychological tests and inventories, Q methodology, checklists, rating scales, score cards, scaled specimens, document or content analysis, sociograms, "guess-who" techniques, and social distance scales.

Description of Enabling Activities: MSED 004.01 (USC-U)

1.2 Discussion of the prospectus is to be primarily concerned with the module's objectives, procedures, activities, resources available, and critical decision points.

1.4.1 Read in Best and/or Borg (see bibliography) re identifying, selecting, stating, defining, and delineating the problem in research.

1.4.2 The lecture re the research problem is to include the information outlined in 1.4.1.

1.5.1 Read Best and/or Borg (see bibliography) re the purpose, form, structure, and criteria for a research proposal and a proposal outline.

1.5.2 The lecture re the research proposal is to include the information outlined in 1.5.1.

1.6 The research problems identified and stated should, in addition to conforming with 1.4.1 and/or 1.4.2, be in the field of action research into delinquency prone or delinquent youth, such youth in school, the interrelations between the troubled youth and school, etc.

These stated problems should be reviewed and discussed with a consultant. This examination of the problem statements is a preliminary to choosing a single problem to research. Discussion should center around the questions posed by Best on pages 24-26; additionally, the problems should be examined in light of whether or not they lend themselves to action research. Those which are not problems for action research should be rejected for the purposes of this module.

1.8.1 Criteria for evaluation of your proposal outline should conform to input from 1.5.1 and/or 1.5.2. The evaluation group should prescribe any elements of 1.9.0 which are necessary for improvement of the proposal outline.

Evaluation of your progress and needs should be concerned with your cognitive development re enabling elements 1.9.1 - 1.9.6 and their relevance for the

project you are working on. The evaluation group should recommend any elements of 1.9.0 which you may voluntarily undertake to aid in your research; Part I of the Pre-Assessment can help the evaluators to make appropriate suggestions.

1.8.2 If your movement into 1.9.0 is prescribed by your evaluation group, plan to enter 1.10 and 1.11 after the element(s) you select from 1.9.0.

If your movement into 1.9.0 is a result of your voluntary decision to seek information to aid in your research, and if your proposal outline was rated satisfactory, plan to omit 1.10 and 1.11.

1.10 See 1.8.2 for instructions re ommission of this step.

If you do not wish to select a new problem for study, you may rework the problem selected for 1.7.

1.11 Refer to 1.8.1.

1.8.2 Refer to 1.8.2 earlier in this section.

1.12.1 Read from the bibliography ("Annotated References," "Action Research," "Examples of Action Research") re the form, style, procedures, mechanics, etc., of reporting action research.

1.12.2 The lecture re reporting action research is to include the information outlined in 1.12.1.

1.13 The criteria for judging the proposal may be found in the Post Evaluation.

Post Evaluation: MSED 004.01 (USC-U)

The questions below* are to be used to evaluate your research proposal. Answer all questions in writing on your own paper. In all places possible, give concrete examples from your proposal to support your answer and to provide additional information. If a question is not applicable, write N/A. After completing this section of the Post Evaluation, meet with other participants, team leaders, staff, and a consultant to discuss this evaluation and the proposal itself in order to determine whether or not any remediation is necessary.

A. Scope and Definition of Study

1. Is your problem being considered broadly enough?
2. Have you sufficiently limited your problem?
3. Have you governed your decisions by the experiences of investigators who have preceeded you?

B. Hypotheses

1. Are the hypotheses promising?
2. Are the hypotheses clearly and precisely stated?
3. Are the hypotheses stated in a form that permits them to be tested?

C. Background

1. Have you made a thorough, careful review of the literature pertaining to your problem?

*Adapted from Walter R. Borg, Educational Research, an Introduction. (New York: David McKay Company, Inc.,1969), pp. 397-404, citing P.M. Symonds, "A Research Checklist in Educational Psychology," Journal of Educational Psychology, XLVII (1956), pp. 101-9.

D. Definitions

1. Have proper distinctions been made between concepts?
2. Is there clear and unequivocal meaning in the use of your terms?
3. Are concepts adequately and accurately defined?
4. From what (whose) point of view are you defining your terms?

E. Method of Study

1. Has a decision as to the method of inquiry been made?
2. If you plan to study individual cases, have you given thought as to how you will go from cases to general conclusions?
3. Are you in a position to secure the data necessary for a successful prosecution of your study?
4. To what extent can you generalize from a single experimental situation?
5. Are you planning to draw general conclusions from a study limited in age, sex, social class, race, etc.?
6. Is the range among your cases sufficient to permit you to demonstrate the relationships in which you are interested?

F. Design

1. Is the design of your study clearly formulated?
2. Have you taken into account the various hidden factors which might influence the results of your study besides the variables that you are specifically planning to study?
3. Have you given sufficient thought to the necessity of controls?

G. Sampling

1. To what extent will you be able to generalize your findings?
2. How stable will your findings be--that is, will they stand up when made under different conditions--when made with other subjects, materials, instructors, examiners, in other places, etc.?
3. Can you simplify your problem by limiting it to a narrower age range, grade range, geographical range, etc.?
4. Are you determining your sampling, or are you letting others select cases for you?

5. If you depend on voluntary participation for your subjects, have you given consideration to what this will do to your sampling?

H. Studying Personality

1. How are you going to ensure that your subjects express their true feelings and attitudes?
2. Is the questionnaire or testing approach going to permit you to get at the inner dynamics?
3. In a study using tests and other objective data, is it possible to question your subjects further to determine attitudes, beliefs, motives, etc.?
4. What is preferable for your study--the questionnaire or interview approach?
5. In using observation material, how can you be sure that your observations are representative?

I. Tests and Measures

1. Are you using the appropriate measures?
2. How will you construct a scale to measure attitude?
3. Can you use a ready-made measuring instrument, or should you construct your own? If the latter, how will you determine its validity and reliability.
4. How valid are your measures?
5. Are there contaminating factors (age, sex, etc.) which might lessen the validity of the test you propose to use?
6. Are your tests sufficiently reliable?
7. Are there norms with which to compare the findings in the group that you are proposing to study?
8. Have you properly disguised your intentions in the test you propose to use?
9. Should a pre-test be given as well as a test at the close of your experiment?
10. If you plan to study the extremes on your scale, would it be well at the same time to pay attention to the intermediate points?

J. Use of Judgment

1. If you plan to use judgments, have you specified the basis on which your judgments would be made?
2. If you plan to use judgments, are you sure your judges have the necessary intelligence, information, background, and other qualifications to permit them to make the judgments?

K. Content Analysis

1. How do you propose to determine your classification scheme?
2. How do you propose to distribute material into the several classificatory categories?
3. Have you provided for determining the reliability of your classifications?
4. Have you sufficiently taken into account the subjective factor in analyzing content material?

L. Statistical Handling of Results

1. Do the conditions of your data warrant using the statistics which you propose to use?
2. Do your data satisfy the assumptions on which the statistical constants which you propose to use are based?

Remediation:

The participant in this module will write a proposal for an action research project. If the proposal - as judged in the post evaluation and in consultation with peers, team leaders, staff and a consultant - needs refining, improvement, reworking, or rewriting, the participant will recycle through the module, beginning with the earliest point which can help solve the problem(s) in the research proposal. He will then work through the module at his own pace, skipping steps in the module which are not relevant to his problems in the research proposal.

GUIDE TO APPENDIX SECTION

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You may choose to work through any elements which have been recommended, prescribed, or which you wish to undertake voluntarily. Within each element there are options which you may choose to work through or omit as you feel appropriate. The order for undertaking elements is optional.

APPENDIX A

MSED 004.01.9.1 (Investigate Library)

The Terminal Objective for this element is:

Given input re the use of the library and its resources in conducting research, the participant lists steps in his research plan in which he will use library resources, indicates the resource to be used, and briefly describes how the resource will be applicable to this step in the research plan.

Culminating Activity: Carry out the necessary steps to meet the terminal objective.

The library is a crucial component in the research process. This element is intended to help the learner acquire information which will be useful to him in conducting his research. Choose only sections which meet your needs and/or interests.

1.9.1.1 Systems of organization in the Library.

1.9.1.1.1 The Geography of the Library

1. Take a tour of the library; a librarian (or an assistant) is available to guide you through the facilities. In addition to showing you where resources are located, the librarian can explain their uses. If you prefer, take an unguided tour. Keep notes of locations and uses of resources.

2. Make a map of the library; this can be done during, after, or independently of a tour. Compare your map with the one published by the library.

3. Interview a librarian or an assistant; ask questions which relate to your needs and/or interests. In addition to general questions, ask for help with specific problems which you are having or anticipate in conducting research. At the beginning of the interview, you should describe your research plans to the librarian.

4. Attend a lecture re the geography of the library. (This lecture may be on audio or video tape.)

5. Read the library publication re its organization and geography.

6. Learner option.

1.9.1.1.2 Classification Systems

1. View a slide/tape presentation re the Dewey Decimal and/or Library of Congress Classification Systems.

2. Interview a librarian re the system of classification used in your library.

3. Attend a lecture re the classification system used in your library. (This lecture may be on audio or video tape.)

4. Read from the bibliography re the Dewey Decimal and/or Library of Congress Classification Systems.

5. Learner option.

1.9.1.2 Library Resources (Card catalogue, indexes, guides, ERIC, reference books, etc.)

1. Interview a librarian re your library's resources. Describe your research plans and ask questions re resources which will be most helpful in your work.

2. Attend a lecture re the library resources (the lecture may be on audio or video tape.)

3. View a slide/tape presentation re the library's resources.

4. Read from the bibliography re library resources.

5. Learner option.

1.9.1.3 Overview of the Library

1. Read Chapter 3 from Best and Chapter 3 from Borg.

2. Read from the bibliography re a general picture of library resources and organization.

3. Learner option.

APPENDIX B

MEED 004.01.9.2 (Investigate Types of Research)

The Terminal Objective for this element is:

Given input in the types (historical, descriptive, experimental) and sub-categories (pure, applied, action) of research, the participant writes a position statement in which he describes the type and sub-category he will pursue as his Master's degree project. He will also outline the rationale behind choosing the type and sub-category. (Since this module is aimed toward action research for teachers, the statement should additionally deal with the relationship between action research and the project chosen by the participant.)

Culminating Activity: Carry out the steps necessary to meet the terminal objective.

Each type of research carries its own philosophy, approach, and techniques. This element provides the learner with information to help him understand the characteristics and applications of each type of research. Choose any activities which will meet your interests and/or needs re the types of research.

1.9.2.1. Read from the bibliography and/or Best (Chapters 4, 5, 6) and Borg (Chapters 9, 10, 11, 13, 14) re the types of research.

2. View a slide/tape presentation (or a film) describing the types of research and problems to be studied by each type; showing investigators pursuing research of each type; giving examples of research conducted in each category.

3. Attend a lecture re the types of research (this lecture may be on audio or video tape.)

4. Interview an experienced researcher re types of research he has done, advantages, disadvantages, and considerations of each, and his research experience.

5. Read research abstracts and/or actual research reports. Analyze these for type and method of research.

6. Learner option.

APPENDIX C

MSED 004.01.9.3 (Investigate Collecting & Organizing Data)

The Terminal Objective for this element is:

Given input re methods, techniques (<u>not</u> <u>tools</u>), and considerations for collecting and organizing data, the participant writes an outline describing the means he will use to collect, organize, and process data in his research project.

Culminating Activity: Carry out the steps necessary to meet the Terminal Objective.

Research data (both statistical and non-statistical) should be gathered, organized, processed, and presented according to methodological procedures. There is little place in common research activities for haphazard and inconsistent techniques and approaches. This element is intended to provide the participant with information and skills in systematic data collection. Choose any activities which meet your needs and interests.

1.9.3.1 Statistical Data

1. Read from the bibliography and/or Best (Chapter 8) and Borg (Chapters 4, 9) re collecting and organizing data.

2. View a slide/tape presentation (or a film) describing and showing methods of collecting and organizing data, and researchers doing these tasks.

3. Attend a lecture re collecting and organizing data (this lecture may be on audio or video tape.)

4. Interview an experienced researcher re means he has used to collect and organize statistical data, problems he has faced, problems you are likely to face, and solutions.

5. Choose a simple research problem; collect and organize statistical data re the problem. (Example: What is the distribution of makes of autos owned by students on your campus? Collect, organize, present data re this distribution.)

6. Learner option.

1.9.3.2 Non-Statistical Data

1. Read from the bibliography and/or Best (pp. 87-91) and Borg (pp. 62-67.)

2. See 1.9.3.1.2.

3. See 1.9.3.1.3.

4. See 1.9.3.1.4; substitute <u>non-statistical</u> for <u>statistical</u>.

5. Choose a simple research problem; collect and organize non-statistical data re the problem. (Example: What problems do students have with their cars? Collect, organize, and present non-statistical (perhaps by means of anecdote) data re these problems.)

6. Learner option.

APPENDIX D

MSED 004.01.9.4 (Investigate Tools of Research)

The Terminal Objective for this element is:

Given input re the tools of research (questionnaire, opinionnaire, observation, interview, psychological tests and inventories, Q methodology, checklists, rating scales, score cards, scaled specimens, document or content analysis, sociograms, "guess-who" techniques, and social distance scales), the participant lists the tools he will use in conducting his research. Further, he indicates the type of information he will gather with these instruments and designs the tools listed.

Culminating Activity: Carry out the steps necessary to meet the Terminal Objective.

The major research tools, if used efficiently and scientifically, are extremely helpful in gathering both subjective and objective information. It is important, however that tools are chosen, designed, applied, and interpreted so that they are most accurate and effective. This element provides information which will help the participant to design and use these tools effectively. Choose any activities which meet your needs and interests.

1. Read from the bibliography and/or Best (Chapter 8) and Borg (Chapter 5, 6) re the tools of research.

2. View a slide/tape presentation (or a film) which shows tools of research being developed and used.

3. Attend a lecture re the tools of research. (This lecture may be on audio or video tape.)

4. Interview an experienced researcher re tools he has used. Discuss the research you are planning and tools which would be appropriate.

5. Undertake some of the activities suggested by Best on pages 200 and 201.

6. Find some tools designed and used by another researcher (Master's theses and Doctoral Dissertations are a good source.) Use these tools to gather information from a test group.

7. Analyze a packet of tools developed and used by another researcher. Consider the tools' strengths, weaknesses, reliability, validity, and effectiveness in providing the desired information.

8. Learner option.

3. Attend a lecture re statistics. (This lecture may be on audio or video tape.)

4. Interview an experienced researcher and/or a statistitian re statistical problems, considerations, and solutions. Discuss the research which you are planning and statistical treatment which would be appropriate.

5. Undertake some of the activities suggested by Best on pages 260-261, 284-285.

6. Analyze the treatment of statistical data in a Master's thesis and/or Doctoral dissertation.

7. Learner option.

APPENDIX F

MSED 004.01.9.6 (Learner Options)

Some possible learner options:

1. Carry on action research.
2. Read independently.
3. Conduct interviews.
4. Analyze proposals.
5. Analyze research reports.
6. Use media.

Participant generated options:

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.
11.

BIBLIOGRAPHY OF REFERENCES - Action Research 590

Best, John. Research in Education. 2nd Edition. Prentice-Hall, 1970.

Borrell, T.W. Learn to Use Books and Libraries.

Borg, Walter R. Educational Research - An Introduction. David McKay Co., Inc. New York, 1969.

Cook, David R. A Guide to Educational Research. Allyn and Bacon, Inc. Boston, 1969.

Kidder, P. Library of Congress Card Order Routine. Kidder Pub.

McCollough, L. VanAtta. Statistical Concepts: A Program for Self-Instruction. McGraw-Hill Pub., Inc.

"Measurement in Education: Mastery Learning and Mastery Testing." EDRS Publishers, (ERIC). 051-299.

ANNOTATED REFERENCES*

Barnes, John B. Educational Research for Classroom Teachers. New York: G.P. Putnam's Sons, 1960. Contains case studies that demonstrate how teachers can use an objective approach to attack problems in their classrooms. The book recognizes the limitations of the average teacher's training in statistics and research design and presents information in a clear and easily understood fashion.

Corey, Stephen M. Action Research to Improve School Practices. New York: Bureau of Publications, Teachers College, Columbia University, 1953. Discusses techniques for carrying out action research and compares action research with traditional educational research and the "common sense" approach to educational problems. A well-written book that will be very helpful to the student who wishes to carry out an action research project.

"Curriculum Development through Action Research," Educational Leadership. 1959, No. 7, pp. 147-53. Discusses the nature and goals of action research as contrasted with

*By Walter R. Borg, Educational Research-An Introduction. Allyn and Bacon, Inc. Boston, 1969. pp. 323-324.